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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION FOR PATENT



Appellant: John H. Selverian
Serial No.: 10/807,797
Filed: March 24, 2004
Title: Lead-In For Electronic Bobbins
Examiner: Tuyen T. Nguyen
Group Art Unit: 2832

CERTIFICATE OF MAILING UNDER 37 CFR 1.8(A)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 21, 2006 by Carlo S. Bessone.

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

COVER LETTER

Enclosed are three copies of an Appeal Brief in the above-entitled application which is submitted in response to the Final Rejection dated September 20, 2005 wherein all the claims then of record (claims 1-4) were finally rejected. A Notice of Appeal was filed on December 23, 2005, together with an authorization to charge the appeal fee to a specified Deposit Account. Pursuant to 37 CFR 1.192, this Appeal Brief is filed in triplicate within two months of the date of filing said Notice of Appeal.

The additional fee of \$500 for filing this Brief in Support of an Appeal under Fee Code 1402 should be charged to Deposit Account No. 15-0685. A duplicate copy of this sheet is enclosed.

OSRAM SYLVANIA INC.
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Danvers, MA 01923
978-750-2076

Respectfully submitted,

Carlo S. Bessone
Reg. No. 30,547



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES-----
Ex parte John H. Selverian

APPLICATION FOR PATENT

Serial No.: 10/807,797
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BRIEF ON APPEAL

This Appeal Brief is submitted in response to the Office Action dated September 20, 2005 wherein all the claims then of record (Claims 1-4) were finally rejected. A Notice of Appeal was filed on December 23, 2005, together with an authorization to charge the appeal fee to a specified Deposit Account. Pursuant to 37 CFR 1.192, this Appeal Brief in support of the appeal is filed in triplicate within two months of the date of filing said Notice of Appeal.

(I) REAL PARTY IN INTEREST

The real party in interest in the above-identified application is OSRAM SYLVANIA INC.

(II) RELATED APPEALS AND INTERFERENCES

It is believed that there are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(III) STATUS OF CLAIMS

Claims 1-4 have been rejected and are herein appealed. These claims are delineated in the Appendix attached hereto.

(IV) STATUS OF AMENDMENTS

No amendment has been filed subsequent to final rejection.

(V) SUMMARY OF CLAIMED SUBJECT MATTER

With particular reference to pages 4-5 and FIGS. 1-5, there is shown in FIG. 1 a coil bobbin 10 comprising a housing 12 having a floor 14 with at least one electrical lead-in 16 projecting therethrough for attachment to a printed circuit board 18. The at least one electrical lead-in 16 is provided with thermal-strain relief 20 between the floor 14 and the printed circuit board 18.

The thermal-strain relief 20 comprises a loop 22 formed in the electrical lead-in 16. The loop can be U-shaped as shown in FIG. 1 or O-shaped as shown in FIG. 3. Additionally, the loop can be formed parallel to the plane of the circuit

board and floor as shown in FIGS. 2 and 3 or it can be normal to that plane, as shown in FIG. 1. The actual orientation of the loop 20 can be dependent upon the amount of space existing between the floor 14 and the printed circuit board 18.

The difference in strain relief between the prior art straight and rigid lead-ins and the strain-relieved lead-ins provided by this invention is shown in FIGS. 4 and 5. As will be seen in FIG. 4 the peak load induced in the straight lead-ins is about 6 kg while with the strain-relieved lead-in the force drops to about 2.5 kg, a significant difference. This lower load due to the strain relief provided in the lead-in of the present invention results in a significantly longer life of the solder joints and hence of the electronic equipment.

(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-4 are unpatentable under 35 U.S.C. 103 over Wohlhieter in view of Eldridge et al.

(VII) ARGUMENT

CLAIMS 1 THROUGH 1-4 ARE NOT OBVIOUS OVER WOHLHIETER IN VIEW OF ELDRIDGE ET AL

According to the Final Office Action dated September 23, 2005, claims 1-4 stand rejected under 35 U.S.C. 103 as being unpatentable over Wohlhieter in view of Eldridge et al. The Examiner is of the opinion that Wohlhieter discloses a bobbin comprising a bobbin housing having a floor/flange, at least one electrical lead-in, and a thermal strain relief means wherein the strain relief includes at least one loop formed in the electrical lead-in with the loop comprising a U-shaped portion. According to the Examiner, Wohlhieter inherently discloses a printed circuit board and the bobbin's at least one electrical lead-in being provided for attachment to the printed circuit board. The Examiner admits that Wohlhieter

fails to disclose the strain relief being provided between the floor/flange and the printed circuit board.

Referring to FIGS. 12A-12C, the Examiner is of the opinion that Eldridge et al discloses an electronic device comprising a housing 1252 structure having a floor, a printed circuit board 1204, and a plurality of terminals 1230 with strain relief structure, wherein the plurality of strain relief of the terminals located between the printed circuit board the floor of the housing structure.

The Examiner concludes that it would have been an obvious to one having ordinary skill [sic] in the art at the time the invention was made to use the strain relief arrangement of Eldridge et al in Wohlhieter for the purpose of providing resilient and facilitate mounting. According to the Examiner the specific shape of the strain relief's loop would have been an obvious design consideration for the purpose of enhancing thermal relief.

This rejection is respectfully traversed and reversal thereof by this Honorable Board is respectfully requested.

Independent Claim 1 defines a coil bobbin comprising a housing having a floor with at least one electrical lead-in projecting therethrough for attachment to a printed circuit board. The at least one electrical lead-in is provided with thermal-strain relief formed in the electrical lead-in between said floor and the printed circuit board.

With particular attention to column 1, lines 47-67, Wohlhieter discloses a spool or bobbin type coil form including a fusible spool head on each side of a central hub about which the turns of the coil are wound. Terminals are formed of rigid wire and extend parallel to the axis of the coil form and through the fusible spool heads. Each terminal includes a bow or kink adjacent the winding to which the initial or final turn is soldered. Wohlhieter specifically teaches that the bow of the inner terminal lies against the coil form while the corresponding kink of the outer terminal lies against the outer layer of the winding.

With particular attention to pages 39-40, beginning at paragraph (0663) to the end of paragraph (0670), Eldridge et al discloses a "gang transfer" technique for mounting resilient contact structures to an external surface of a semiconductor package. With specific attention to FIGS. 12A-12C, FIG. 12A shows a plurality of resilient contact structures 1230 which have been fabricated on a carrier or sacrificial substrate 1204. As illustrated in this figure, a plurality of contact structures 1230 mounted to a carrier 1204 are brought into a position to be mounted to the package 1252, with the tips 1230b of the contact structures aligned with the pads 1280 on the package. As further illustrated in this figure, a quantity of solder 1282 is disposed on each of the contact pads 1280, prior to introducing the contact structures 1230. In FIG. 12B, the contacts have been brought to bear, en masse, upon the corresponding contact pads 1280, with their tips immersed in the solder 1282. As illustrated in this figure, it is not essential that the tips 1203b of the contact structures physically contact the contact pads 1280, since the solder will reflow around the tip portion of the contact structure 1203 and effect a reliable electrical connection between the contact structure and the contact pad. FIG. 12C illustrates a final step, wherein the sacrificial substrate 1204 is removed.

The above rejection is respectfully traversed and reconsideration thereof is requested. Appellant respectfully submits that there is no teaching, suggestion, or motivation for modifying Wohlhieter in the manner proposed by the Examiner. More specifically, there is no teaching, suggestion, or motivation for using Eldridge et al's contact structures 1230 which are intended for use with a semiconductor package in the spool or bobbin type coil form of Wohlhieter as proposed by the Examiner.

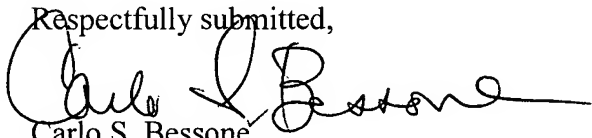
Appellant respectfully submits that in view of the above, it is evident that the only way the Examiner could have arrived at his conclusion is through hindsight analysis by reading into the art the teachings of the Appellant. Hindsight analysis is clearly improper, since the statutory test is whether "the subject matter as a whole would have been obvious at the time the invention was made."

Absent such teaching or suggestion, the invention as defined by independent Claim 1 is deemed fully patentable over Wohlieter and Eldridge et al. Withdrawal of the rejection under 35 U.S.C. § 103 and allowance of independent Claim 1 is respectfully urged.

Appellant's Claims 2-4 are dependent on independent Claim 1, and therefore include all recitations thereof. Moreover, Appellant's dependent claims include additional limitations that, when combined with the recitations in Claim 1, render these claims further distinct and non-obvious over the cited references. Therefore, Claims 2-4 are likewise deemed allowable.

For the reasons and arguments presented above, Appellants submit that claims 1-4 are deemed fully patentable over Wohlieter and Eldridge et al. Accordingly, reversal of the Examiner's rejection of Claims 1-4 under the provisions of 35 U.S.C. 103 by this Honorable Board is earnestly and respectfully requested.

Respectfully submitted,


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on February 21, 2006 by Carlo S. Bessone

(VIII) CLAIMS APPENDIX

The following represent all of Appellant's claims on appeal:

1. A coil bobbin comprising:

a housing having a floor with at least one electrical lead-in projecting therethrough for attachment to a printed circuit board, said at least one electrical lead-in being provided with thermal-strain relief formed in said electrical lead-in between said floor and said printed circuit board.

2. The coil bobbin of Claim 1 wherein said thermal-strain relief comprises at least one loop formed in said electrical lead-in.

3. The coil bobbin of Claim 2 wherein said loop comprises a U-shaped portion.

4. The coil bobbin of Claim 2 wherein said loop comprises an O-shaped portion.

(IX) EVIDENCE APPENDIX

Item not relevant

(X) RELATED PROCEEDINGS APPENDIX

Item not relevant